

**CLIENT SATISFACTION WITH  
HOME CARE SERVICES IN  
RURAL RUSSIA**

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## **ABSTRACT**

The objective of this work is to explore the satisfaction of a sample of 300 frail elderly living in a rural Russian area with the support services provided by social service agency staff. The client population lives in extremely difficult conditions in terms of housing and associated communal services. They reported extremely high levels of satisfaction with the agency provided services, both general satisfaction and their satisfaction with the specific services received during the reference visit inquired about by the interviewer. The degree of satisfaction is likely related to the difficulty of their living environment and their probable poverty, as well as the quality of services received. Attempts to relate the variance in the satisfaction ratings to the extent of activity limitations and the volume of formal and informal care using multivariate analysis met with limited success, owing in part at least to the limited variance in the dependent variables. Nevertheless, the patterns identified are broadly consistent with expectations based on modeling previously done for the US populations receiving at-home care. The results clearly indicate the value of providing such services to frail elderly in such circumstances.

## CLIENT SATISFACTION WITH HOME CARE SERVICES IN RURAL RUSSIA

Practitioners and analysts alike in North America and Western Europe appreciate the importance of providing at-home supportive services to the frail elderly to maintain their independent living arrangements and improve their life quality.<sup>1</sup> The countries of Eastern Europe and the Commonwealth of Independent States, like their western counterparts, have recognized this for some years; and their health care systems are evolving away from institution-based care.<sup>2</sup> Koulaksazov et al. (2003, pp.58-9), for example, report a strong shift since 1999 in Bulgaria in where “social care” is provided to the frail elderly, from institutions to clients’ homes. There has, however, been little documentation of the scope and quality of the services provided, at least in terms of English-language publications.

It is known that typically these services have been provided by public agencies, i.e., by social workers directly employed by municipalities. While NGOs became active in this arena in some countries during the transition, they generally have not evolved into contracted providers of such services (Struyk, 2002). In other words, municipal agencies are often monopolistic suppliers of such services. Without strong internal quality controls, this kind of arrangement can breed poor service quality and little responsiveness to clients’ specific needs.<sup>3</sup> Thus it is possible that there are problems of service delivery in some countries.

This paper provides a critical assessment of the quality of services provided in one Russian locality. In-home services are new in Russia, being created in 1995 by a specific federal law. Under the law, such services are to be available throughout the country, and coverage is perceived to be good.<sup>4</sup> Based on the project team’s experience and the opinion of the responsible Deputy Governor for the study region, the program assessed can be considered to be better than most. While this is indeed a case study, it nevertheless applies a rigorous methodology to document the situation. The methodology itself can serve as a model for governments in Eastern Europe and the CIS to follow in undertaking similar assessments. In brief, we find surprisingly high levels of client satisfaction with the service provided and that satisfaction varies as expected with clients’ degree of impairment and the volume of supportive services received.

The next section provides some context for the analysis, with a short description of the allocation of responsibilities for delivering these services in Russia and the basis for selecting the study locality. The following section outlines the assessment methodology, and is followed by the analytic results. The paper closes with some conclusions.

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<sup>1</sup> See, for example, OECD (1998, 1991), Newman and Struyk (1990b).

<sup>2</sup> See, for example, Bezrukov (2002) on Ukraine and Krisciunas (2002) on Lithuania.

<sup>3</sup> For a discussion of the potential gains from contracting out for such services in former Soviet bloc countries, see Struyk (2002).

<sup>4</sup> Federal Law, “About the Social Services Delivery to Elderly and Disabled People,” number 122, August 2, 1995. Note that the statement in the text is not necessarily inconsistent with the one in a 1998 World Health Organization report that stated the following respect to long-term care for the elderly: “There are no day centers, nor is there a formal system of providing helpers to allow people to continue to live independently in their homes” (WHO, 1998, p.61) that was probably based on field work before the program came into operation.

## CONTEXT

Russian Federation law mandates that at-home services be provided by local social service agencies to qualifying frail elderly and disabled persons. The Federation law and associated regulations contain a list of 21 at-home services that are to be provided. In practice, a plan is made for each client and the most badly needed services are delivered. To be eligible for services, one must be elderly (above 60 for men and 55 for women), live alone or be without family, although possibly living with a non-relative, and be certified by a local doctor as needing regular assistance. Those certified as being disabled are also eligible without regard to age. Eligibility is not means tested.

The study region is the Balashovsky District (*raion*), similar to a county or Kreis in Germany, and the town of Balashov in the Saratov Region (*oblast*), equivalent to a US state or German Land. The district has a total population of 128,000, of which 33,000 live outside of Balashov City. In the rural areas, the focus of our analysis, there are about 1,100 elderly persons receiving supportive services at home, administered by twelve area offices that belong to the Social Service Center.<sup>5</sup> The District offers the services set mandated by the national government. The District has developed additional guidance to assistance providers for some of these. The typical service model for clients included in this analysis is for the assistance giver to visit the client three times per week with about 1.5 hours of actual service delivery time.<sup>6</sup> The most needy clients are visited five days a week and receive up to four hours of assistance per visit. The minimum amount of service time is 15 minutes. A service plan is made for each client. The caregiver and client agree on the services to be provided during the next visit and this is recorded in a register that the client keeps. Clients sign the register at the conclusion of the visit indicating that they received certain services. Clients can also purchase a wide range of services from the social service agency. There is a published price list for these services.

The district is distinguished by an active program of performance measurement and by general attention to detail. In 2003, information was gathered on every recipient of at-home services through interviews on their status, activities, and needs. While the different area offices employ a variety of outcome measures and conduct different analyses, the important point is that such activity is going on at all. In the project team's experience with over 20 Russian cities, this is truly exceptional. The Saratov Region government asked the team to work with the District to improve their operations as part of their effort to improve service delivery throughout the region. The Balashov program is considered the best in the region and therefore the one best suited to serve as a "center of excellence" for other agencies.

## ASSESSMENT METHOD

This Section covers two broad topics: the type of information collected, and sampling and the analysis structure. As a preliminary matter, note that the assessment focused on the services provided, i.e., it did not address the issue of whether the client received the most appropriate services given her

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<sup>5</sup> Contrary to the usual practice in Russia, this agency belongs to the Saratov regional (oblast) government. The City of Balashov also has a separate social services agency that is operated by the Oblast. Under the new law on Local Self-Government that will take effect in 2006, regional governments will be directly responsible for the delivery and financing of social services. In other words, the Balashov structure will be adopted nationally.

<sup>6</sup> The law mandates that clients be visited a minimum of two times per week.



condition. The client population studied excluded persons receiving skilled medical care and monitoring in addition to the standard support services.

### Information collected

Information was collected in three areas: client status, the services provided during a specific visit, and client satisfaction with the specific services and the services in general. Wherever possible, we employed protocols thoroughly validated in prior studies. In keeping with the purpose of the analysis, care delivered and care quality is viewed from the client's perspective.

"Status" in this case encompasses basic demographic information, information on the client's ability to perform activities of daily living (ADLs) and instrumental activities of daily living (IADLs), indicators of the clients health status, and the availability of assistance from family members and friends. We relied substantially on the questions in these domains in the "Standardized Outcome and Assessment Information Set for Home Health Care—OASIS-B" because they have been validated in various studies and are well known to many analysts (Shaughnessy et al., 1997). Some changes were made to the questions about the living environment to correspond to conditions in rural Russia.

These data were collected for each client through an in-person interview by the social worker that usually provides services to the client. The municipal home care providers were strictly admonished to record the client's response and not to substitute their own observations because of the documented systematic differences between the opinions of clients and professionals on items like ADLs (Morrow-Powell et al., 2002, Capitman et al. 1997).<sup>7</sup> The care providers did fill in the number of hours of services normally provided weekly to the client and if the client also received meals delivered to her home.

The first panel of Table 1 lists the variables created with the information just described along with their sample means. Most of these are self-explanatory but a couple deserves some comment. We created summary variables for the eight ADL and six IADL indicators. For the ADL, we initially created four dummy variables to capture degrees of impairment.<sup>8</sup> In the end, however, a simple count of impairments proved highly serviceable. For IADLs two specifications are tested, one that is a simple count of the six IADLs where impairment is present and a second where the client reports limitations in all six IADLs.<sup>9</sup> The questionnaire gathered information on problems in the client's living environment that has been coded into five dummy variables indicating the presence of the following problems: the lack water piped into the unit;

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<sup>7</sup> There is a substantial literature on the challenges of interviewing the frail elderly in quality assessment surveys. The studies warn of factors like dementia, fatalistic resignation, low expectations, and fear of retaliation after unfavorable assessments. Nevertheless, the general assessment is the interviews produce valid results overall. See, for example, Bowers et al. (2001) on this point for nursing home populations—a group clearly more problematic in this regard than those interviewed in this study; and Ross et al. (1995) for an out-patient hospital population.

<sup>8</sup> Different analysts have used different approaches. Some simply count the number of ADLs where the respondent has limitations. Others differentiate among certain types of impairment. Newman and Struyk (1990a), for example, use a two variable approach, one that indicates limitations in either toileting or and for limitations in eating; these two impairments are singled out as indicating an especially severe level of overall impairment. The four level-scale used here initially followed the one employed by Rabiner (1992) in an analysis similar to this one. A simpler variable was adopted when the more complex scale did not perform well in the multivariate analysis.

<sup>9</sup> There has been some analysis of constructing a single index of impairment combining IADL and ADL indicators; see Spector and Fleishman (1998).

presence of high stairs to be climbed to enter the unit; lack of a washing machine; lack of a refrigerator; presence of a leaky roof.

Information about the services actually provided and staff gathered client satisfaction from the district social assistance office Methodological Center (MC) through telephone interviews or in-person interviews, where the client did not have a phone or could not use it. We acknowledge that it is possible that staff could have shaded answers to be positive, out of desire to make the overall district program look good in the eyes of regional authorities. We did not attempt to independently verify the information presented.

Each assistance giver prepares a list of activities they are to perform during their next visit at the conclusion of the current visit. This list is to be developed with the client. Beginning a month before the surveys, the assistance givers submitted a copy of these lists to the central office at the end of each day. They were told that the forms were being used to determine more accurately the types of services being provided by the program. The intention was for the assistance givers to be unaware of the client interviews, and we believe we were generally successful in maintaining this story. In any case, they could not know which day the MC would conduct the interview.

When the MC staff member interviewed a client, she had the list for the services that were to have been delivered the previous day for reference. The interviewer asked about each of these services. If a service had not been provided, she asked for the reason. It may have been that the client and social worker decided that the client needed some other service because of a change in conditions. But it also may have been that the social worker just omitted the service without explanation. The reason given was recorded.

Where a service was provided, two questions were asked about the service. The first inquired as to whether the task was done thoroughly or well; the respondent was read three characterizations of how well the task was done and asked to select the one that best described the experience. The second question inquired directly about the client's satisfaction with the way the work was done; again, three choices were read to the client and the client asked to select that fit best. The interviewer asked about up to five assistance tasks that were listed on the form prepared after the prior visit.

**Table 1. Definitions of Status Variables**

Label	Definition	Mean	Std. dev.
	<b><i>Limitations</i></b>		
AGE	Age of client	74.4	8.83
AGE2	Age of client squared	5612	1242
MALE	Var=1, if client is male	0.20	0.39
ADLS <sup>10</sup>	Number of 8 possible ADLs where person needs person assistance to do the task	0.80	1.27
IADL-LMT	Number of IADLs that client is unable to perform	1.96	1.42
MED	Var=1, if client cannot administer medications to self	0.084	0.28

<sup>10</sup> Defined as the client requiring some level of personal assistance to perform the task.





Label	Definition	Mean	Std. dev.
	<b><i>Living environment</i></b>		
STAIRS	Var=1, if high stairs must be used to reach the unit or to access living or sleeping areas within the unit	0.057	0.232
NOWATER	Var=1, if dwelling has no running water	0.94	0.23
LEAK	Var=1, if roof leaks	0.12	0.32
NOWASH	Var=1, if there is no washing machine in the unit	0.19	0.39
NOFRIG	Var=1, if there is no refrigerator in the unit	0.09	0.28
	<b><i>Informal support present</i></b>		
ALONE	Var=1, if client lives alone	0.66	0.48
NO-SUPRT	Var=1, if no one provides informal support to client	0.26	0.44
EXHELP	Var=1, if informal support received from relatives or friends not living with the client	0.53	0.50
INTHELP	Var=1, if informal support received from person living with the client	0.25	0.43
FREQ1	Var=1, if main caregiver identified, and visits at least daily	0.40	0.49
FREQ2	Var=1, if main caregiver identified, and visits 3 or more times per week but less than daily	0.07	0.26
FREQ3	Var=1, if main caregiver identified, and visits 1 or 2 times per week	0.15	0.36
SUP1	Var=1, if main caregiver identified, and assists with ADLs	0.09	0.29
SUP2	Var=1, if caregiver identified, and assists with IADLs	0.20	0.40
SUP3	Var=1, if caregiver identified, and provides psychosocial support	0.45	0.50
	<b><i>Formal support</i></b>		
HOURS	No. of hours per week of services provided by the municipal agency	6.76	1.75
TIMES	No. of times per week services provides	2.96	0.47
NUMSERV	No. of services provided on visit monitored	3.40	0.90
PAIDLIV	Var=1, if client lives with a paid caregiver	0.003	0.06
PAIDHELP	Var=1, if client purchased services from agency	0.95	0.22
PAIDOPT1 <sup>11</sup>	Var=1, if paid services purchased weekly	0.91	0.29
PAIDOPT2	Var=1, if paid services purchased every 2 weeks	0.05	0.22
PAIDTYP1 <sup>12</sup>	Var=1, if paid services are household services or cooking services		
PAIDTYP2	Var=1, if sanitary or personal hygiene services	0.07	0.25
PAIDTYP3	Var=1, if client purchases hairdresser services	0.007	0.083

The final information block is on the client's general satisfaction with the services received. Obtaining this information is essential because of the well-documented relationship between a client's general level of satisfaction with the caregiver and her expressed satisfaction with specific services.<sup>13</sup> For these indicators, we adopted the carefully developed and validated set promulgated by Geron et al. (2000)—a series of 13 questions, listed in the notes to Table 2, that have been used in a number of

<sup>11</sup> Omitted categories are once a month and only once or twice over the six month period.

<sup>12</sup> Omitted categories are gardening and yard clean-up services and clothing, linens and shoe repair.

<sup>13</sup> See, for example, Eustis et al., 1993; Chou et al., 2002; Schauffler et al., 1996.

studies.<sup>14</sup> Following Rabiner (1992), we employ a three level satisfaction measure. The questions are shown in Table 2.

## Sampling

The sample design was driven by the desire of the district administration to have statistically reliable results for the at-home services delivered by each of a sample of the twelve area offices within the district and by an overall budget constraint for the interviewing. In determining the sample size, satisfaction with overall at-home services (defined below) was taken as the variable of primary interest. We could locate no information on prior survey results in Russia on variables of this type. So we made two calculations and decided the sample size based on the comparative results. First, we used information on the mean and variance of a similar satisfaction variable for a national sample of elderly in the US receiving such services (Rabiner, 1992). Second, we estimated the necessary sample size to measure satisfaction with a three point scale accurately within a 10 percent error at a 95 percent confidence level by using a random number generator to assign values to each observation, under varying assumptions about the distribution of responses across the three answers, i.e., the degree of concentration in the central answer versus the two extremes. The required sample size for each area office was determined to be about 50 clients. With a budget sufficient for 300 interviews, six area offices were included in the study. The actual sample size was the same as that targeted, with clients who died replaced with those from a reserve list; none refused to participate.

## Analysis Structure

This Section describes the variables of primary interest defined using the information outlined above and then describes the model estimated to produce standardized outcome measures.

### *Summary output and outcome measures*

In addition to examining the distributions of the responses, we analyzed one output and three outcome variables that were constructed to capture the essence of the information on the services provided by the municipal agency caregiver. Their complete definitions are listed along with their means in Table 2.

- Output: “services delivered”—the variable was defined as the percent of services that should have been delivered that were provided; a “not provided service” is one not provided without the client stating that she agreed that the service was not needed or another service should be provided instead.
- Outcome: “service quality”—the sum over the services provided of the scores of the responses to the how well or how thoroughly done question, divided by the sum of the maximum scores for the same number of services.

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<sup>14</sup> These questions are similar to those used in other analyses. One example is the unpublished Home Care Client Supplement of the Medicare Current Beneficiary Survey (MCBS). Also, the questions in the Consumer Assessment Plan Survey (CAHPS), although directed to a different population, have a broadly similar orientation.



- Outcome: “specific service satisfaction”—the sum over the services provided of the scores of the responses to the satisfaction question, divided by the sum of the maximum scores for the same number of services.
- Outcome: “general satisfaction”—the average of the satisfaction score for the 13 components. About half of the questions are phrased from a positive prospective and the balance from a negative one to help guard against response bias.<sup>15</sup> In computing the summary variable, a consistent positive scale was adopted.

The “services delivered” variable has a straightforward interpretation and is clearly very important for monitoring the services provided to the client. If services that are supposed to be provided are not being delivered, this is a cardinal problem.

#### *Analysis of variation in outcomes*

Calculation of the variables just described will yield a basic description of service quality and satisfaction. At the same time, it is likely that the extent of client satisfaction with the services depends on factors quite independent of the services actually provided. Proper interpretation of the satisfaction outcomes should take these factors into account. Indeed, prior research has demonstrated that satisfaction with home care services varies systematically with certain factors (Rabiner, 1992; Benjamin and Matthias, 2001). Based on these analyses, the maintained hypotheses for the present analysis are that holding other factors constant:

**Table 2. Definitions of Output and Outcomes**

Label	Name	Definition	Mean	Std. dev.
SRVDEL	Services delivered	Percent of services that should have been delivered that were provided; a “not provided service” is one not provided without the client stating that she agreed that the service was not needed or another service should be provided instead	0.975	0.112
SERVQUAL	Service quality	Sum over the services provided of the scores of the responses to the how well or how thoroughly done question, divided by the sum of the maximum scores for the same number of services <sup>16</sup>	0.988	0.047
SPECSAT	Specific service satisfaction	Sum over the services provided of the scores of the responses to the satisfaction question, divided by the sum of the maximum scores for the same number of services <sup>17</sup>	0.913	0.128

<sup>15</sup> Geron et al, 2000; Ross et al. (1995).

<sup>16</sup> Coding was as follows: 3=she did a very thorough job; 2=she did a satisfactory job; 1= the work was not at all thoroughly done. The maximum variable value is 1.0.

<sup>17</sup> Coding was a follows: 3=I am fully satisfied; she did a good job; 2=It was OK; I am somewhat satisfied; 1=I am not at all satisfied; she did a poor job. The maximum variable value is 1.0.

Label	Name	Definition	Mean	Std. dev.
GENSAT	General service satisfaction	Average of the satisfaction score for the 13 components. About half of the questions are phrased from a positive prospective and the balance from a negative one to help guard against response bias. In computing the summary variable, a consistent positive scale was adopted. <sup>18</sup>	2.82	0.193

Client satisfaction is positively related to the presence assistance from other, informal caregivers: the additional services can substitute for failings or simply a lack of sufficient time on the part of the municipal assistance giver to provide services. The overall higher quality of life is reflected in ratings of specific services:

- Client satisfaction is negatively related to the degree of the client's incapacity as measured by ADL and IADL indicators: the greater the incapacity, the greater the need for assistance.
- The greater the volume (hours) of services provided by the municipal agency, the greater the degree of satisfaction.
- Client satisfaction is greater when the client receives supplemental care from informal sources.
- Client satisfaction with individual services is greater where the client is generally more satisfied with the caregiver and services provided.

To explore the importance of these factors on service delivery satisfaction in Russia, a model was defined in which satisfaction is stated to depend on: the client's age, the extent of activity limitations, the degree of informal support available to the client, the volume of services received from the municipal agency, and whether the caregiver delivered the services scheduled to be provided. Age is included as an additional indicator of frailty. These variables are defined in Table 1.

<sup>18</sup> The statements read to the client are listed below. For each the client was asked to select one of three responses in terms of her agreement with the statement: yes, definitely; maybe yes, maybe no; no, definitely not. After adjustment to a consistent scale (with positive values highest), these were assigned values of 3, 2, and 1 in the coding. Maximum variable value is 3.0.

1. My homemaker is very thorough
2. My homemaker leaves too early
3. My homemaker has become a friend
4. My homemaker is rude to me
5. In general, my homemaker takes an interest in me
6. I need more hours of homemaker services each week
7. My homemaker does things the way I want them to be done
8. My homemaker arrives late
9. Generally, my homemaker knows what to do
10. My homemaker ignores what I tell her about how I like things done
11. My homemaker is assigned enough time to do all the jobs I need to have done
12. My homemaker does extra things for me
13. I wish my homemaker could do more things that I need to have done



The models were estimated using ordinary least squares regression (OLS). While ordered probit would be appropriate for analysis of individual satisfaction scores, OLS is serviceable for averages across satisfaction scores that are the dependent variables here.<sup>19</sup>

## RESULTS

Results are presented in two parts. The first reviews information on the conditions in which clients live, their degree of impairment, the extent of the assistance received and their reported satisfaction with agency services. The second section presents the results of the multivariate analyses.

### Client, environment, and service characteristics

Possibly the most striking feature of the client population is the extremely difficult circumstances in which they live (Table 1). 83 percent report not having running water in the unit; 91 percent did not have the toilet inside the unit. 19 percent do not have a washing machine; 9 percent do not own a refrigerator. Coupled with these challenging housing conditions, two-thirds of the clients, who average age 74, live alone. Therefore, it is not surprising that the mean number of ADLs and IADLs are modest at 0.80 and 1.96, respectively. Even with significant assistance, these elderly people must have significant mobility to fetch water and use an outside toilet throughout the year.

In terms of support, 26 percent report no regular informal assistance. On the other hand, two-thirds identified a primary caregiver and of this group 40 percent have an informal care provider visit them at least daily and another 7 percent once or twice per week. Interestingly, most informal support is classified as psychosocial rather than help with ADLs or IADLs. The average client receives about 6.7 hours of help per week from agency staff divided between two visits. The maximum service level reported is 24 hours per week and 5 visits. Given clients' extremely modest housing circumstances, it is surprising that essentially all clients (95 percent) purchase additional services from the agency, and most of these (91 percent) purchase these supplementary services weekly. The most common type of supplementary services are housekeeping and cooking (90 percent). These high level of purchased services suggest that the formal free services and informal services are quite insufficient compared with client needs, although no significant correlation was found between the purchase of help, on the one hand, and the hours of formal assistance received, living alone, or the lack of informal support, on the other. Worth noting is that services purchased from the agency are still heavily subsidized.

With respect to clients' satisfaction with agency services, the record is very positive (Table 2). A very large share—97.5 percent—of services that were scheduled to be provided were provide during the visit that was monitored through the interviews (SRVDEL). The record is highly positive for the other outcome measures as well. For the rating of the quality of each of up to five services received during the monitored visit (SERVQUAL), the overall score is 0.98 out of a possible 1.0. The similar score for

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<sup>19</sup> One can argue that the four variables are all inter-related and that this simultaneity should be taken into account in the estimation. We considered using the 2SLS procedure but were unable to define a set of independent variables for the first stage models that were not themselves probable determinants of the satisfaction ratings. So this procedure was not employed.

satisfaction (SERVSAT) with these services was 0.91 out of 1.0. Finally, the composite score for the 13 questions measuring overall satisfaction with the caregiver (GENSAT) was 2.82 out of possible 3.0.

What creates such high satisfaction scores? Part of the explanation may be that support services of this type are still a comparatively new phenomenon in Russia. They did not exist under the Soviet system, under which the program's clients all grew to maturity. Another factor is that most of the clients live on very small incomes. The average pension for a single person in 2003 in Russia averaged about \$60.38. In the evolving market economy, these persons get little priority attention in shops and at medical facilities. So the simple fact of receiving attention, concerned attention, on a regular basis could easily make them sufficient thankful to be less critical than persons in other circumstances would be with the services delivered.

### Multivariate analysis

The four dependent variables—SERVQUAL, SERVSAT, GENSAT, and SERVDEL—are characterized by a low degree of variance. Their coefficients of variations are 4.8, 14.0, 6.7, and 11.5, respectively. Hence, successfully fitting multivariate models is difficult. The results for specific variables are often not very robust, but one or another variable from the same group, e.g., volume of informal assistance received, consistently tend to be significant in a given model.

Table 3 presents the results of the best models estimated in this exploratory analysis. As anticipated, their explanatory power is low, with the adjusted  $R^2$  for every model being less than 0.1. Nevertheless, the significant relations identified are consistent with expectations and broadly with studies done of client satisfaction in the US. In the table, the independent variables are in the same four groups as used in Table 4. With respect to the results for GENSAT, a greater number of ADL limitations and problems with the home environment, as indicated by a leaky roof (LEAK), reduce overall satisfaction with agency home care services.

Because the ADL and IADL variables are quite highly correlated (simple correlation of 0.6), the ADL finding should be thought of as a general activity limitation indicator. The result for LEAK, which probably is capturing other difficult aspects of the living environment, is only marginally significant. Workers from one of the field offices consistently have less satisfied clients than other workers. Also as expected, receipt of more services increases client satisfaction significantly, and purchasing of services from a caregiver who comes at least weekly has a marginally significant impact.

Satisfaction with the specific services provides (SPEC SAT) is significantly negatively related to ADLS and positively to the frequency with which informal services are received, with clients with daily assistance being less critical of the services provided by the agency. In this instance, the staff from one agency area office does a significantly better job than the others.

Comparatively weak results were obtained in explaining the variance in SERVQUAL. ADLS has only a marginally significant negative effect on the ratings. Informal support is a significant determinant as indicated by less frequent assistance visits having a negative effect on the ratings. Additionally, assistance from non resident relatives or friends (EXHELP) has the effect of reducing satisfaction with services provided by agency staff by a small but significant amount.



Finally, a somewhat different set of variables is associated with the delivery of the services in a particular visit that were agreed at the conclusion of the prior visit. The absence of a washing machine in the dwelling (NOWASH) is negatively related to plan fulfillment. This presumably reflects the unscheduled need for the caregiver to wash items by hand as well as generally difficult physical environment. With respect to activity limitations, in this instance the client's age is more associated with service delivery than direct measures of activity limitations. Although both the linear and quadratic AGE variables are statistically significant and of different signs, their combined effect is positive and quite linear—0.63 at age 65, 0.66 at age 80, and 0.65 at age 85. So overall, older clients are more likely to have all the planned tasks completed by agency caregiver. The final significant factor is the frequency with which the primary non resident informal caregiver visits the client. FREQ2—visits less than daily but at least 3 times per week—have a negative association with plan fulfillment. This may well indicate that the informal caregiver provides takes care of some of the tasks planned for the agency person.

**Table 3. Regression Results\***

	GENSAT	SPECSAT	SERVQUAL	SERVDEL
Constant	2.72 (56.2)	0.904 (96.2)	1.00 (237.1)	0.342 (1.83)
<b>Environment</b>				
LEAK	-0.057 (-1.70)			
NOWASH				-0.035 (-2.07)
<b>Limitations</b>				
ADLS	-0.020 (2.34)	-0.017 (2.89)	-0.003 (-1.35)	
AGE				0.016 (3.02)
AGE2				-9.84E-05 (-2.59)
<b>Informal support</b>				
FREQ1		0.041 (2.37)		
FREQ2				-0.062 (-2.05)
FREQ3			-0.025 (-2.66)	
EXHELP			-0.013 (2.21)	

	GENSAT	SPECSAT	SERVQUAL	SERVDEL
<i>Formal support</i>				
NUMSERV	0.029 (2.40)			
PAIDOPT1	0.046 (1.44)			
Other				
CENTER1	-0.112 (3.80)			
CENTER8		0.069 (3.48)		
Adj. R <sup>2</sup>	0.098	0.078	0.059	0.062
F statistic	7.46	9.15	7.02	5.82
Sign.	0.000	0.000	0.000	0.000

\*t-statistics are in parentheses

## CONCLUSIONS

This paper has explored the satisfaction of frail elderly living in a rural area in Russia with the support services provided by social service agency staff. The caregivers interviewed clients to obtain the information on client status and living situation and a analytic group that is part of the agency interviewed the clients about their satisfaction with the services received.

The client population lives in extremely difficult conditions in terms of housing and associated communal services. They reported extremely high levels of satisfaction with the agency provided services, both general satisfaction and their satisfaction with the specific services received during the reference visit inquired about by the analytic office staff. The degree of satisfaction is likely related to the difficulty of their living environment, and their probable poverty, as well as the quality of services received.

Attempts to relate the variance in the satisfaction ratings to factors found to influence client satisfaction ratings in the US met with quite limited success, owing in part at least to the limited variance in the dependent variables. Nevertheless, the patterns identified are broadly consistent with expectations based on modeling previously done in the US

A clear conclusion from a policy perspective is that these services are very successful in improving the recipients' lives. The ratings argue pervasively for continuing them. However, because the agency studied is acknowledged to be a leader in this area and we have analyzed the practices of a single agency in any event, one cannot generalize these findings to other Russian agencies. Our findings show that the





delivery of services by local agencies can result in high client satisfaction scores. The key question is whether this result is being achieved by other agencies even in the same Subject of the Federation.

The second finding of evidence of systematic variation in client satisfaction scores with their degree of activity impairment and level of formal and informal care received indicates that Russian agencies should employ client satisfaction measures as their outcome indicators with caution. Failure to interpret differences in satisfaction scores for programs among agencies or regions without controlling for differences in activity limitations, living environment and the extent of informal services received would likely invalidate comparisons.



## REFERENCES

- Benjamin, A.E., R.E. Matthias. 2001. "Age, Consumer Direction, and Outcomes of Supportive Services at Home," *The Gerontologist*, vol 41, no.3, pp. 632-42.
- Bezrukov, V.V. 2002. "Case Study-Ukraine," in J. Brodsky, J. Habib, and M. Hirschfeld (eds.), *Country Case Studies in Long-Term Care: Vol 1, Developing Countries*. Geneva: World Health Organization.
- Bowers, B.J., B. Fibich, and N. Jacobson. 2001. "Care-as-Service, Care-as-Relating, Care-as-Comfort: Understanding Nursing Home Residents' Definitions of Quality," *The Gerontologist*, vol. 41, no.4, pp. 539-45.
- Capitman, J., R. Abrahams, and G. Ritter, 1997. "Measuring the Adequacy of Home Care for Frail Elders," *The Gerontologist*, vol. 37, no.3, pp. 303-13.
- Chou, S.-H., D.P. Boldy, and A.H. Lee. 2002. "Resident Satisfaction and Its Components in Residential Aged Care," *The Gerontologist*, vol. 42, no.2, pp. 188-98.
- Eustin, N., R. Kane, and L. Fischer. 1993. "Home Care Quality and the Home Care Worker: Beyond Quality Assurance as Usual," *The Gerontologist*, vol. 33, pp. 64-73.
- Geron, S.M., K. Smith, S. Tennstedt, A. Jette, D. Chassler, and L. Kasten. 2000. "The Home Care Satisfaction Measure: A Client-Centered Approach to Assessing the Satisfaction of Frail Older Adults with Home Care Services," *Journal of Gerontology—Social Sciences*, vol.55B, no.5, pp.S259-70.
- Koulaksazov, S., S. Todorova, E. Tragakes, S. Hristov. 2003. *Health Care Systems in Transition: Bulgaria*. Copenhagen: European Observatory on Health Care Systems.
- Krisciunas, A. 2002. "Case Study-Lithuania," in J. Brodsky, J. Habib, and M. Hirschfeld (eds.), *Country Case Studies in Long-Term Care: Vol 1, Developing Countries*. Geneva: World Health Organization.
- Morrow-Powell, N., E. Proctor, and P. Rozario. 2001. "How Much Is Enough? Perspectives of Care Recipients and Professionals on the Sufficiency of In-Home Care," *The Gerontologist*, vol 41, no.6, pp. 723-32.
- Newman, S., and R. Struyk. 1990a. "Overwhelming Odds: Caregiving and Risk of Institutionalization," *Journal of Gerontology: Social Sciences*, vol. 45, no. 5, 1990, pp. S173-183.
- Newman, S., and R. Struyk. 1990b. "Housing and Supportive Services: Federal Policy for the Frail Elderly and Chronically Mentally Ill," in D. DiPasquale and L.C. Keyes (eds.) *Building Foundations: Housing and Federal Policy*. Philadelphia: University of Pennsylvania Press, pp. 435-64.
- OECD. 1998. "Long Term Care Services to Older People, A Perspective on Future Needs: The Impact of an Improving Health of Older Persons." Paris: OECD, Aging Working Paper, AWP 4.2.
- OECD. 1991. *Urban Policies for Aging Populations: Major Findings and Options*. Paris: OECD.



- Rabiner, D. 1992. "The Relationship Between Program Participation, Use of Formal In-home Care, and Satisfaction with Care in an Elderly Population," *The Gerontologist*, vol.32, no. 6, pp. 805-12.
- Ross, C.K., C.A. Steward, and J.M. Sinacore. 1995. "A Comparative Study of Seven Measures of Patient Satisfaction," *Medical Care*, vol.33, no.4, pp. 392-406.
- Shaughnessy, P.W., K.S. Crisler, and R.E. Schlenker. 1997. "Medicare's OASIS: Standardized Outcomes and Assessment Information Set for Home Health Care—OASIS-B." Denver: Center for Health Services and Policy Research.
- Spector, W.D., and J.A. Fleishman. 1998. "Combining Activities of Daily Living With Instrumental Activities of Daily Living to Measure Functional Disability," *Journal of Gerontology: Social Sciences*, vol. 53B, no.1, pp. 546-57.
- Struyk, R. 2002. "Nonprofit Organizations as Contracted Local Service Providers in Eastern Europe and the Commonwealth of Independent States," *Public Administration and Development*, vol. 22, pp. 429-37.
- World Health Organization 1998. *Health Care Systems in Transition: Russian Federation*. Copenhagen: World Health Organization Regional Office for Europe.